MATLAB codes

Code for reflection co-efficient

(Shown in the presentation)

```
Lamda=2;
beta= 2*pi/Lamda;

d1=linspace( 0.1, 1.6, 1000);
ZL=200;
Zo=50;

zL=ZL/Zo;

Z_d1=Zo*(zL+1j*tan(beta.*d1))./( 1+1j*zL.*tan(beta.*d1));
Z_d1_mag=abs(Z_d1);
Z_d1_phase=angle(Z_d1);

figure (1)
plot(d1, Z_d1_mag)
title('Magnitude of input impedance')
xlabel('length')
ylabel('Magnitude')
figure(2)
plot(d1, Z_d1_phase)
title('Phase of input impedance')
xlabel('length')
ylabel('Phase in radian')
```

Code for input impedance

(Shown in the presentation)

```
%Reflection coefficient
Lamda=0.5;
beta= 2*pi/Lamda;
d1=linspace( 0.1, 1.6, 1000);
ZL=200-50j;
Zo=50;

Gamma_0=(ZL-Zo)/(ZL+Zo);

Gamma_L=abs(Gamma_0).*exp(1j*angle(Gamma_0)-1j*(2*beta.*d1));

Gamma_L_mag=abs(Gamma_L);
Gamma_L_phase=angle(Gamma_L);
figure (1)
plot(d1, Gamma_L_mag)
title('Magnitude of reflection co-efficient')
xlabel('length')
ylabel('Magnitude')
figure(2)
plot(d1, Gamma_L_phase)
title('Phase of reflection co-efficient ')
xlabel('length')
ylabel('Phase in radian')
```